Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

TITLE V / SYNTHETIC MINOR (DRAFT PERMIT) NO. V-07-001
Rayloc
MORGANFIELD, KENTUCKY 42437
DECEMBER 28, 2006
D. BRIAN Ballard, REVIEWER
SOURCE ID: 21-225-00018
SOURCE A.I. #: 4078
ACTIVITY ID: APE20040002

SOURCE DESCRIPTION:

The Rayloc facility in Morganfield, Kentucky produces remanufactured automobile parts. Operations at the facility include abrasive blasting, solvent cleaning, surface coating, degreasing and removal of dirt and grease from parts by burning off. The facility is currently operating under permit V-98-043 (Revision 1). Correspondence has been submitted by the facility during the review process to aid in updating the permit.

The correspondence received on September 14, 2006 includes information on surface coating operations at the facility (e.g., current usage rates and material safety data sheets for coating and solvents). The correspondence also identifies those emission points that are no longer active and which should be removed from the permit.

An application for the addition of a parts washer, two paint booths, two metal shot blaster units and a sand blaster unit was received on November 16, 2006. All of these emission points qualify as insignificant activities.

Additional correspondence was received from Air Quality Services, LLC of Evansville Indiana on behalf of the Rayloc facility on December 1, 2006. This correspondence was sent in response to an e-mail sent by the Division on September 28, 2006. It confirms that asbestos is no longer processed at the facility and provides emission calculations for abrasive blasting, grinding and soldering operations.

COMMENTS:

Emissions from surface coating are determined by material balance assuming the entire content of VOC and HAP in the coatings is emitted. Emissions of particulate from surface coating are determined by material balance, using a transfer efficiency of 25 percent for spray application and 95 percent for dip application. Where spray booths are equipped with particulate filters a control efficiency of 90 percent is applied to the emission rate. The annual potential to emit from surface coating is based on 8,760 hours of operation.

The maximum hourly and annual emission rates of VOC and HAP from the degreaser are determined using the formula for a batch vapor cleaning machine in section 63.465 (e) of Subpart T.

Particulate emissions from the Wheelabrators are determined using data provided in the correspondence received from Air Quality Services, LLC on December 1, 2006. An hourly process weight rate is determined by dividing the annual amount of waste material generated from each process divided by 6,240 hours. A control efficiency of 99 percent from the dust collection systems is applied to the hourly emission rate. The annual potential to emit from the Wheelabrators is based 8,760 hours of operation.

COMMENTS (CONTINUED):
Emissions of VOC and PM/PM_{10} from the burn-off oven are based on a test conducted at the facility on December 14, 2006. Pre and post weights were obtained on five bins of pieces to determine the uncontrolled emission rate. The duration of the bake cycle was 3 hours and 38 minutes or 3.63 hours. The average difference between the pre and post weights was determined to be 4.8 pounds. The uncontrolled hourly emission rate is 4.8 pounds / 3.63 hours = 1.32 pounds/hour. It is assumed that ninety-five percent of the emissions are VOC and the remaining five percent are PM/PM_{10}. The maximum number of parts processed in this unit is based on correspondence received from Air Quality Services, LLC on December 1, 2006. This correspondence projects that the oven will operate 6 hours per day for 5 days per week to process 2800 pieces per day in 2007. An average hourly rate of pieces processed per hour is determined as follows: 2800 pieces/day / 6 hours/day = 467 pieces/hour. Applying a safety factor of 1.285, the maximum hourly processing rate is 467 x 1.285 = 600 pieces/hour. Emission factors for natural gas combustion are referenced from AP 42 Chapter 1.4, Tables 1.4-1 and 1.4-2. The afterburner is assumed to achieve a destruction efficiency of fifty percent for VOC emissions.

EMISSION AND OPERATING CAPS DESCRIPTION:
1) Source-wide VOC emissions shall not exceed ninety (90) tons per rolling twelve-month period.
2) The idling emission rate of the solvent cleaning machine shall be determined within 180 days of the issuance date of this permit. Failure to determine the emission rate in the above specified timeframe will result in termination of the authority to operate this unit until compliance as been demonstrated.
3) The occurrence of a temperature alarm shall be interlocked with burn off oven operation, resulting in shutdown of the oven.
4) The shot blasting filter units shall be in place and operating efficiently during shot blasting operations.

Note: The VOC emission limit precludes applicability of 401 KAR 51:017 - Prevention of significant deterioration of air quality, 401 KAR 59:185 – New solvent metal cleaning equipment, and 401 KAR 59:225 – New miscellaneous metal parts and products surface coating operations.

PERIODIC MONITORING:

ID	Description	Monitoring Requirements
01 04 07	Dip Tanks and Spray Booth Spray Booth Spray Booth	Perform a qualitative visual observation of the opacity of emissions from the spray booth stacks weekly. Monitor the usage of VOC containing paints, solvents or any VOC/HAP containing material monthly.
27	Degreaser	Comply with the applicable monitoring requirements of Subpart T §63.466. Monitor the pounds of solvent added monthly. Monitor the pounds of liquid solvent removed monthly. Monitor the pounds of solvent removed as solid waste monthly.

PERIODIC MONITORING (CONTINUED):

ID	Description	Monitoring Requirements
33	Burn Off Oven	Perform a qualitative visual observation of the opacity of emissions from the stack weekly. Monitor the number of pieces processed monthly. Monitor the volume of natural gas burned annually. Monitor the combustion chamber temperature of the afterburner continuously.
34 37 38 39 40	Six Vibratory Tumbling Units Touch-up Painting Dip Tank for Calipers Two Dip Tanks for Motors Cleaning of Motors	Monitor the usage of VOC containing paints, solvents or any VOC/HAP containing material monthly.
18 19	Wheelabrators 1, 2 and 3 Wheelabrators 4 and 5	Inspect filters, gaskets, seals and filter cleaning mechanism semiannually.
IA	Insignificant Activities 15 – Ventless Spraybooth 16 – Ventless Spraybooth	Monitior annual coating use.

Source-wide VOC emissions shall be monitored monthly.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.